

Semiclassical Green's functions of magnetic point contacts

Useinov N.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2015, Pleiades Publishing, Ltd. We propose a method for constructing the semiclassical symmetric and antisymmetric Green's functions of magnetic point contacts with uniform magnetization of different ferromagnetic electrodes. The obtained antisymmetric Green's function permits studying the ballistic and diffusion transport of electrons through the magnetic contact with the electrochemical potential inhomogeneity taken into account.

<http://dx.doi.org/10.1007/s11232-015-0289-8>

Keywords

magnetic heterostructure, magnetic point contact, ordinary differential equation, semiclassical Green's function